OLYMPUS

Data Projector
VP-1

USER'S MANUAL (Simplified Edition)

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Introduction

Congratulations on your purchase of the OLYMPUS VP-1 data projector.
Please read the USER'S MANUAL (Simplified Edition) and the USER'S MANUAL (CD-ROM Edition) carefully and use the projector properly. After reading, please store in a safe place.

IMPORTANT
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SVGA is a registered trademark of Video Electronics Standards Association.
TMDS is a trademark of Silicon Image Inc.
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IMPORTANT SAFETY INFORMATION

⚠ CAUTION

TO PREVENT SHOCK, DO NOT OPEN THE CABINET. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED OLYMPUS DIGITAL TECHNICAL SUPPORT.

WARNING

TO PREVENT FIRE OR SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. DO NOT USE THIS UNIT'S GROUNDED PLUG WITH AN EXTENSION CORD OR IN AN OUTLET UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED. DO NOT OPEN THE CABINET. THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. ALL SERVICING MUST BE DONE BY QUALIFIED OLYMPUS DIGITAL TECHNICAL SUPPORT.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

The above cautions are given on the bottom of the product.

WARNING This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

RF Interference

WARNING

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by OLYMPUS in this manual. Failure to comply with this government regulation could void your right to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

DOC Compliance Notice
This Class A digital apparatus complies with Canadian ICES-003.

Important Safeguards

These safety instructions are to ensure the long life of the unit and to prevent fire and shock. Please read them carefully and pay attention to all warnings.

Installation

- For best results, use the unit in a darkened room.
- Place the unit on a flat, level surface in a dry area away from dust and moisture.
- Do not place the unit in direct sunlight, near heaters or heat radiating appliances.
- Exposure to direct sunlight, smoke or steam can harm internal components.
- Handle the unit carefully. Dropping or jarring can damage internal components.
- Do not place heavy objects on top of the unit.

Power Supply

- The unit is designed to operate on a power supply of 100-240 V 50/60 Hz AC. Ensure that your power supply fits these requirements before attempting to use the unit.
- The socket-outlet shall be installed near the unit and shall be accessible.
- Handle the power cable carefully and avoid excessive bending. A damaged cable can cause electric shock or fire.
- Disconnect the power cable (mains lead) from the power outlet after using the unit.
  Before disconnecting the power cable, make sure that the POWER indicator lights in amber (not blinking or in green).

Cleaning

- Disconnect the power cable from the unit.
- Clean the cabinet of the unit periodically with a damp cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
- Use a blower or lens paper to clean the lens, and be careful not to scratch or damage the lens.
- Clean the ventilation slots and speaker grills on the unit periodically using a vacuum cleaner. If accumulated dust blocks the ventilation slots, the unit will overheat, which may cause the unit to malfunction.
  Use a soft brush attachment when using the vacuum cleaner. Do not use a hard attachment, such as a crevice tool, to prevent the damage to the unit.

Lamp Replacement

- Be sure to replace the lamp when the Status indicator comes on. If you continue to use the lamp after 1100 hours of usage, the lamp will turn off.

Fire and Shock Precautions

- Ensure that there is sufficient ventilation and that vents are unobstructed to prevent the buildup of heat inside the unit. Allow at least 10 cm (3 inches) of space between the unit and walls.
- Prevent foreign objects such as paper clips and bits of paper from falling into the unit. Do not attempt to retrieve any objects that fell into the unit. Do not insert any metal objects such as a wire or screwdriver into the unit. If something should fall into the unit, immediately disconnect the power cable from the unit and have the object removed by a qualified Olympus Digital Technical Support.
- Do not place any liquids on top of the unit.

Warnings

- **Do not look into the lens while the unit is on. Serious damage to your eyes could result.**
- **Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.**
- **Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to melting of the cap and possibly burning your hands due to the heat emitted from the light output.**

Checking the Supplied Accessories

Remove the main unit and the accessories from the box and check that the following items are included.

Note

The text of the User's Manual (Simplified Edition) contains 2 types of reference pages which refer to the "CD-ROM Edition" and the "Simplified Edition" of the User's Manual. Please note the indications listed below which appear at the back of the reference pages and refer to the respective reference page location.
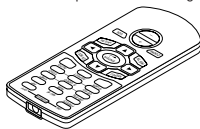
(S): Simplified Edition
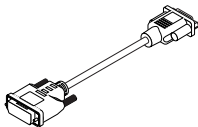
(C): CD-ROM Edition

Example: See Page E-XX(C).

**Remote control
(includes one button battery) [1]**
This controls the projector. Please remove the transportation insulation sheet at time of purchase. See Page E-9(S).
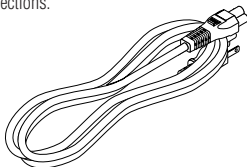
Power cable (1.8 m / 5.9 feet) [1]
This power cable supplies power to the unit. See Page E-16(S) about connections.

**DVI / mini D-sub 15-pin conversion cable
(19 cm / 0.6 feet) [1]**
This is used when the monitor connector of the personal computer is a mini D-sub 15-pin connector. See Page E-13(S) about connections.

**RGB signal cable
(mini D-sub 15-pin, 2 m / 6.6 feet) [1]**
This is used when the monitor connector of the personal computer is a mini D-sub 15-pin connector. See Pages E-13(S) about connections.
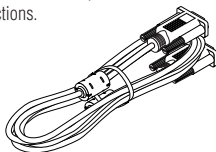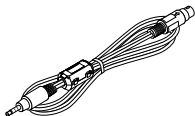
S-Video cable (3.5 mm diameter plug / mini DIN 4-pin plug, 1.5 m / 4.9 feet) [1]
This cable is used in the connection of video equipment that has an S-video connector. See Page E-14(S) about connections.

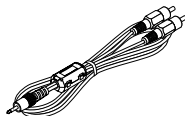**Video cable (3.5 mm diameter plug / RCA pin plug, 1.5 m / 4.9 feet) [1]**
This cable is used in the connection of video equipment that has an RCA jack type video connector. See Page E-14(S) about connections.
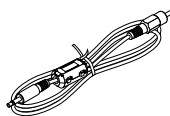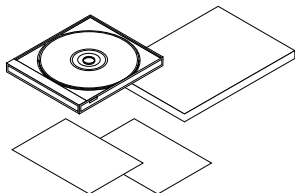
Audio cable (2.5 mm diameter plug / RCA pin plug, 1.5 m / 4.9 feet) [1]
This cable is used with equipment that has phono type audio jacks. See Page E-14(S) about connections.
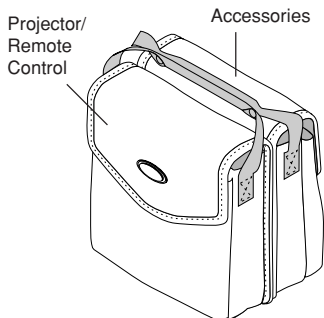
User's Manual (CD-ROM Edition) [1]
User's Manual (Simplified Edition) [1]
QRG (Quick Reference Guide) [1]
Warranty Card (LIMITED WARRANTY) [1]
Product Registration [1]
Replacement Sheet
(Priority Replacement Program) [1]

Soft case (for projector/remote control and accessories) [1]
This case is used when storing the projector. The case is made up of two portions that are joined by hook-and-loop tape to form a single item. The case can be separated into two pieces.

Projector/
Remote
Control

Accessories

Using the User's Manual (CD-ROM Edition)

The User's Manual (CD-ROM Edition) is a version of the User's Manual that has been prepared in the Portable Document Format (PDF).

Adobe Acrobat Reader 5.1 (English Version) Installation

1. Load the CD-ROM into the CD-ROM drive.
2. Open CD-ROM "Start".
3. Open the "Acrobat Reader" folder within the CD-ROM.
4. Open the "English" folder.
5. For Windows :
   Run "AcroReader51_ENU.exe".
   For Macintosh :
   Run "Acrobat Reader Installer".
6. Follow the procedure that is displayed on the screen and start the installation.

Opening the User's Manual

1. Load the CD-ROM into the CD-ROM drive.
2. Open CD-ROM "Start".
3. Double click on "Index.pdf" within the CD-ROM. This will launch Adobe Acrobat Reader and a language selection list for the User's Manual will be displayed.
4. Move the mouse pointer to the desired language and click. The User's Manual will open. Please see the Help menu for details about Adobe Acrobat Reader.

• Adobe Acrobat Reader is a trademark of Adobe Systems Incorporated.
 Windows is a registered trademark of the Microsoft Corporation in the USA and other countries.
 Macintosh is a registered trademark of Apple Computer Inc.

Precautions
* Leave the power cable plugged in (for 5 to 10 minutes) until the projector returns to room temperature before placing the projector inside the soft case. Placing the projector into the case soon after switching off the power could cause the projector to break down.
* Be sure to attach the lens cap and place the projector into the soft case with the lens facing upward.

Names of the Main Unit Parts

STATUS indicator [E-31,32(S)]

POWER button [E-16,17(S)]

SOURCE button [E-20(S)]

POWER indicator [E-16,17,31,32(S)]

MENU button [E-38(C)]

AUTO button [E-21(S)]

QUICK MENU button [E-24(S)]

Speaker

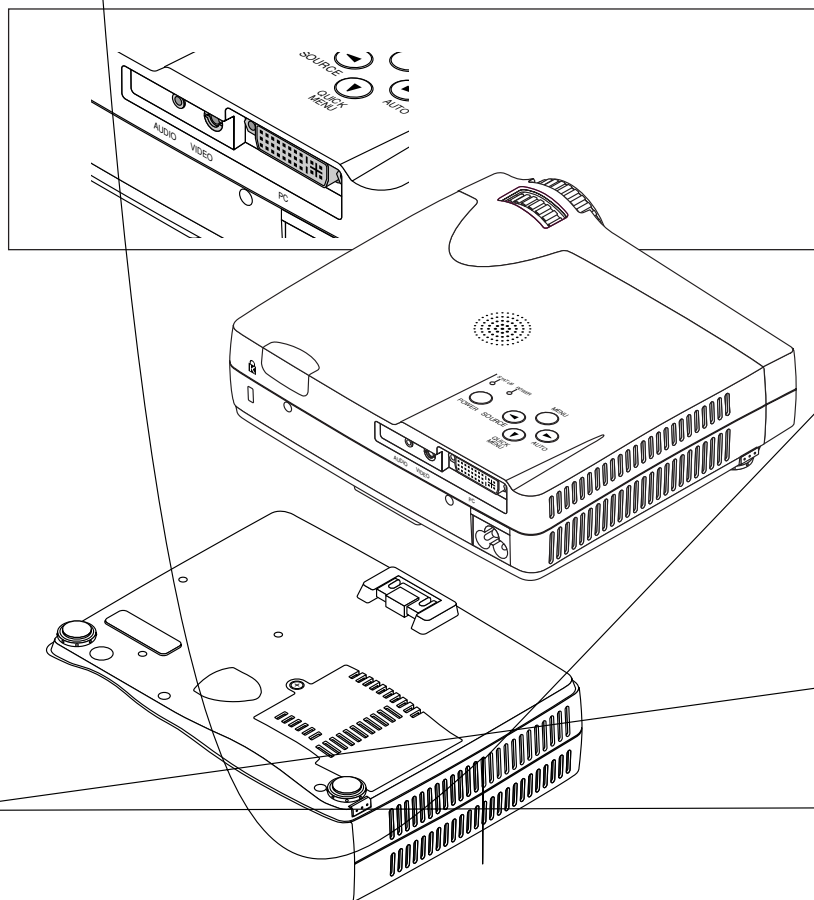Remote control sensor [E-14(C)]

Exhaust vents

Exhaust vents

Ventilation slots

Remote control sensor [E-14(C)]

Lens

Front adjuster button [E-19(S)]
(There is also one on the left side.)

Focus ring [E-19(S)]

Zoom ring [E-18(S)]

Lens cap
To protect the lens, attach the lens cap when the projector is not in use.

Precautions
The ventilation slots discharge the heat of the lamp and care must be taken not to come into contact with them.

E-6

SOURCE

QUICK
MENU

AUTO

AUDIO   VIDEO

PC

POWER SOURCE

QUICK
MENU

AUTO

AUDIO VIDEO

MENU
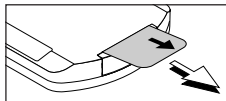
PC

Names of the Remote Control Parts

Infrared transmitter [E-14(C)] ————————
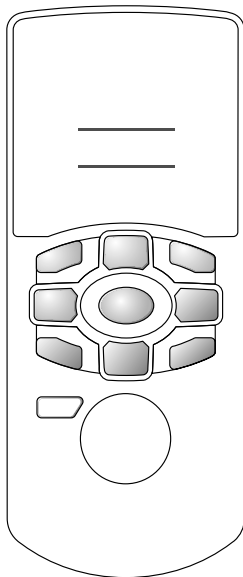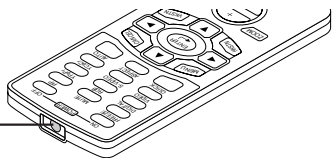
+/– button
(Used in all adjustments)

Preparing the Remote Control
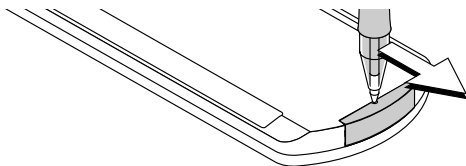
Button Battery Replacement

Using the remote control for the first time
The battery compartment is fitted with a transportation insulation sheet at the time of purchase. Pull out the sheet and remove it. The remote control is now ready for use.

Replacement Method

1 **Insert the tip of a ballpoint pen or some other pointed object into the hole of the battery holder, then pull out to open.**

2 **Remove the old battery and install a new button battery with (+) side facing upward in the battery holder.**

Purchase a CR2025 type battery for replacement.
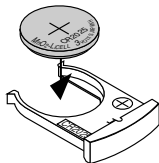
3 **Insert the battery holder into the remote control and push in until the battery holder closes with a "click" sound.**
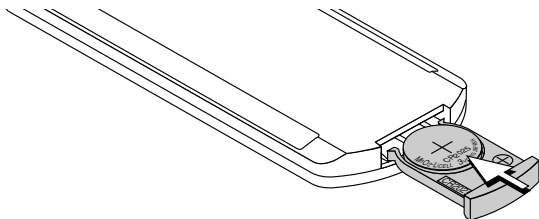
CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type (CR2025) recommended by the manufacturer.
Dispose of used batteries according to your local regulations.

E-9

Placement Guide

- Use this information as a guide to find out about the screen size when the projector is placed at a certain location, or to find out the approximate size of a screen that will be required.
- The projection distance over which focussing is adjustable is 1.20 m (3.9 feet) to 9.44 m (30.97 feet). The projector should be placed within this range.

Screen Size and Projection Distance

Screen Size Designation (Inches)

200"
180"
150"
120"
100"
80"
60"
40"
26"

Height from center of lens to top edge of the projection

h_1 Height from center of lens to bottom edge of the projection

h_2

1.20 (3.94)
1.54–1.85 (5.05–6.07)
2.33–2.80 (7.64–9.19)
3.12–3.75 (10.24–12.30)
3.91–4.70 (12.83–15.42)
4.70–5.64 (15.42–18.50)
5.89–7.07 (19.32–23.20)
7.04–8.45 (23.10–27.72)
7.86–9.44 (25.79–30.97)

Unit: m (feet)

Lens surface of the main unit

E-10
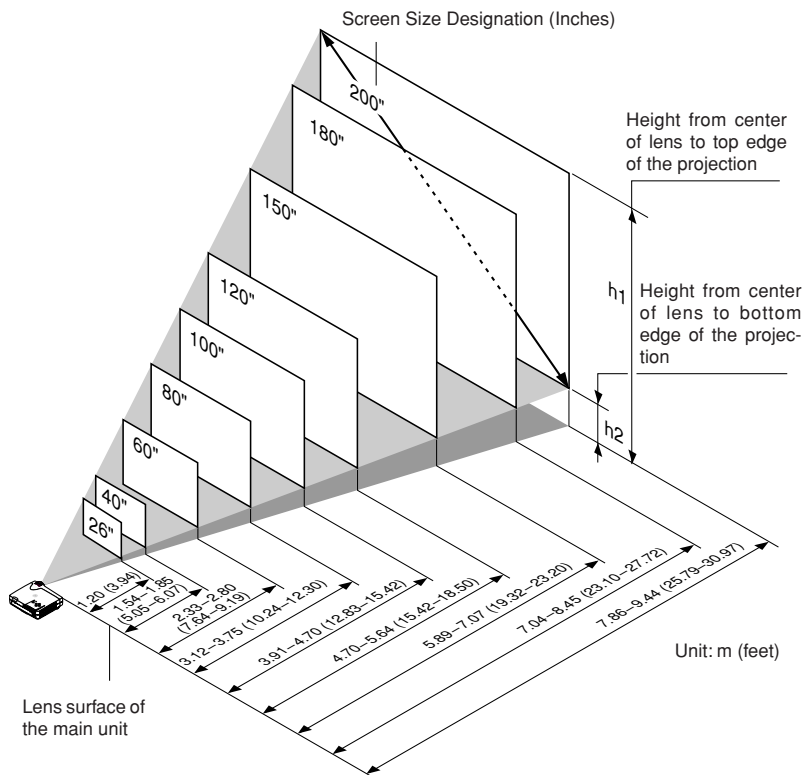
Projection Distance Table

| Screen Size Designation (Inches)	Screen Size Width x Height		Projection Distance		Height h1		Height h2	
	(m)	(feet)	(m) Wide — Tele	(feet) Wide — Tele	(m)	(feet)	(m)	(feet)
26"	0.53 × 0.40	1.74 × 1.31	— – 1.20	— – 3.94	0.47	1.54	0.07	0.23
40"	0.81 × 0.61	2.66 × 2.00	1.54 – 1.85	5.05 – 6.07	0.72	2.36	0.11	0.36
60"	1.22 × 0.91	4.00 × 2.99	2.33 – 2.80	7.64 – 9.19	1.07	3.51	0.16	0.52
80"	1.63 × 1.22	5.35 × 4.00	3.12 – 3.75	10.24 –12.30	1.43	4.69	0.21	0.69
100"	2.03 × 1.52	6.66 × 4.99	3.91 – 4.70	12.83 –15.42	1.79	5.87	0.26	0.85
120"	2.44 × 1.83	8.00 × 6.00	4.70 – 5.64	15.42 –18.50	2.14	7.02	0.31	1.02
150"	3.05 × 2.29	10.00 × 7.51	5.89 – 7.07	19.32 –23.20	2.68	8.79	0.39	1.28
180"	3.66 × 2.74	12.00 × 8.99	7.04 – 8.45	23.10 –27.72	3.21	10.53	0.47	1.54
200"	4.06 × 3.05	13.32 × 10.00	7.86 – 9.44	25.79 –30.97	3.57	11.71	0.52	1.71

* There is a tolerance of ±5% due to design values.
* This table uses the lens apex and lens center as references and requires that the projector be in a horizontal condition (with front and rear adjusters fully withdrawn).

Width

Screen size (Diagonal)

Height

E-11
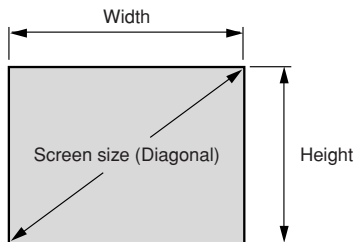
Connecting Personal Computers and Video Equipment

● Connecting this unit with a personal computer permits presentation data to be projected as a large screen display at conferences, lectures, and on other occasions.

Connections with PC Connectors

Please check the following matters before making connections to the personal computer.

* Suitable resolution is 1024×768 pixels (XGA), and the displayable resolution is 1280×1024 pixels (SXGA).
 Note that input of a resolution that exceeds the displayable resolution will cease to be projected and should this be the case, you will need to change the resolution to a displayable resolution at the computer side. Check with "Table of Supported Frequencies" on Page E-70(C).
* The setting method of the personal computer will differ depending on the personal computer that you are using. For information, read the instruction manual for your personal computer, read the on-line help, or contact the manufacturer of your personal computer.

Personal Computers with a DVI Connector
* Make the connection with a DVI-D cable (which is available as an option) and the PC connector of the projector.
  When connecting, arrange the connectors in the proper orientation and plug in. Turn the screw knobs and fasten to the connector of the main unit.

Monitor output

AUDIO VIDEO

Personal computer

DVI-D cable (Available as an option. Stock No. 205202)
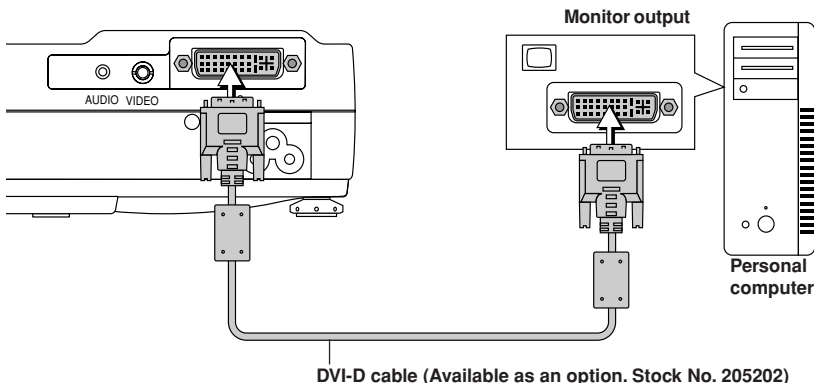
Note
* *Please see Page E-20(S) "Input Selection" for information about making input selections.*
* *This projector uses a 29-pin DVI connector that supports the digital interface. Digital signal TMDS (Transition Minimized Differential Signalling) of the DVI (Digital Visual Interface) standard is used.*

Personal Computers with a mini D-Sub 15-Pin Connector

* Make the connection to the projector's PC connector and the mini D-sub 15-pin connector through the use of a DVI/mini D-sub 15-pin conversion cable.

* When connecting, arrange the connectors in the proper orientation and plug in. Turn the screw knobs and fasten to the connector of the main unit.
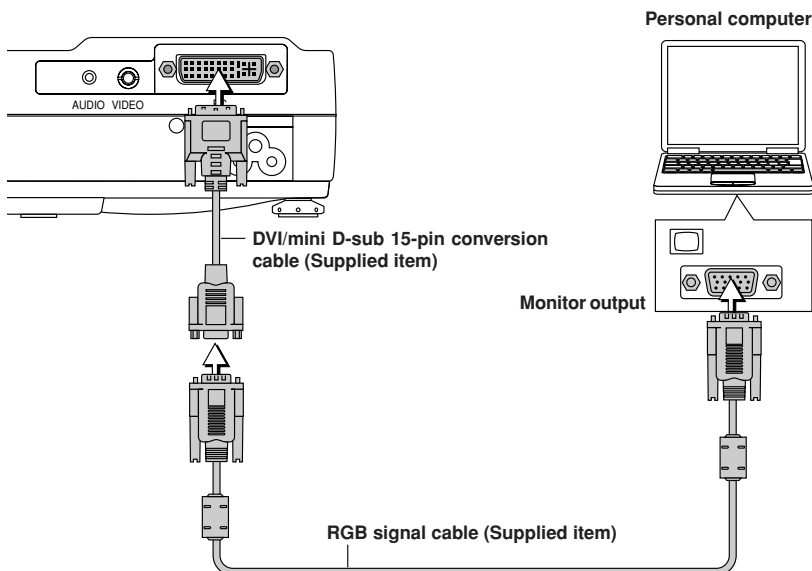
Personal computer

AUDIO VIDEO

DVI/mini D-sub 15-pin conversion cable (Supplied item)

Monitor output

RGB signal cable (Supplied item)

Note

* *Please see Page E-20(S) "Input Selection" for information about making input selections.*

* *Before making connections, check the power of the projector and the equipment to be connected is switched off.*

* *When projection will be with a notebook computer connected, knowledge will be required for the cable connection and notebook computer startup procedure as well as the operation that follows startup. Please consult the instruction manual of your notebook computer or the on-line help.*

E-13

Connections with Video and Audio Connectors
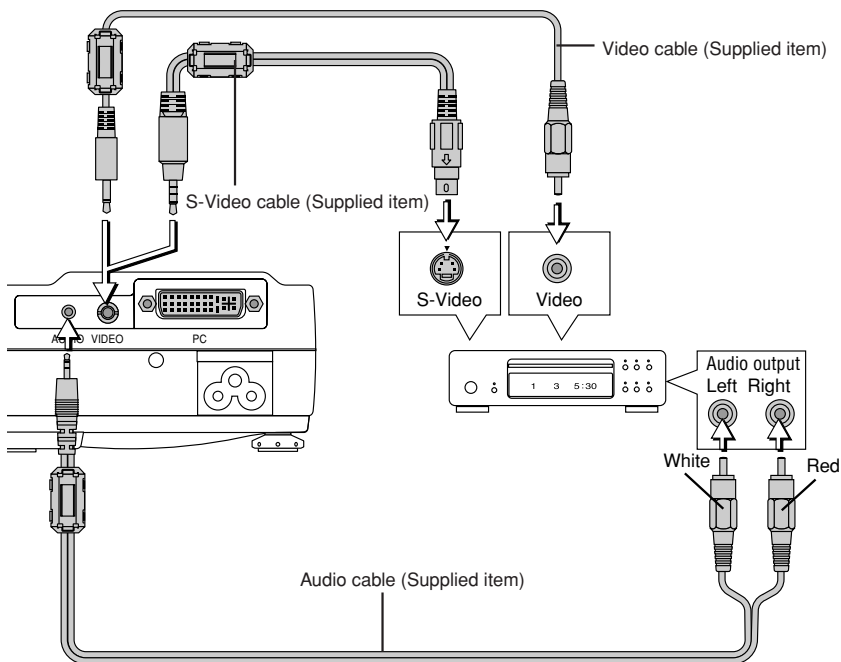
Video Equipment with VIDEO Connectors
* Make the connection to the VIDEO connector of the projector using a video cable.

Video Equipment with S-VIDEO Connectors
* Make the connection to the VIDEO connector of the projector using an S-video cable.

Audio Connectors
* Make the connection to the projector's AUDIO jack using an audio cable.
* The built-in speaker of the projector provides monaural audio.
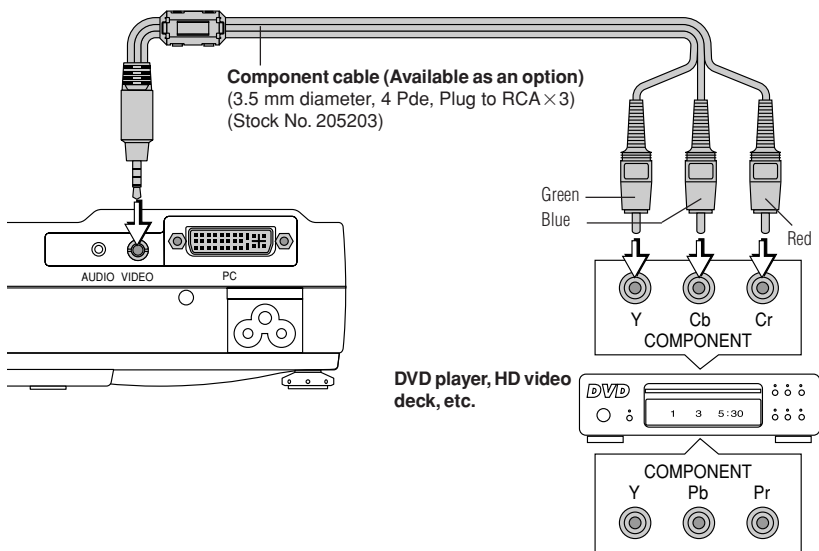* To enjoy convincing audio reproduction, please connect the audio output of the video equipment to your audio system.

Video cable (Supplied item)

S-Video cable (Supplied item)

S-Video   Video

AUDIO   VIDEO   PC

Audio output
Left Right

1   3   5 : 30

White   Red

Audio cable (Supplied item)

Note
* *Please see Page E-20(S) "Input Selection" for information about making input selections.*
* *The AUDIO jack of the projector is a 2.5 mm diameter stereo mini jack. Connection is not possible using the common (3.5 mm diameter) stereo mini jack cable from the headphone jack of the personal computer or video equipment.*

E-14

Connections with Component Video Sources

When the Video Connectors are Y, Cb, and Cr Connectors
* Make the connection to the projector's VIDEO connector using a component cable (which is available as an option).

Component cable (Available as an option)
(3.5 mm diameter, 4 Pde, Plug to RCA×3)
(Stock No. 205203)

Green
Blue
Red

AUDIO VIDEO   PC

Y   Cb   Cr
COMPONENT

DVD player, HD video deck, etc.

DVD   1   3   5:30

COMPONENT
Y   Pb   Pr

Note
* *Please see Page E-20(S) "Input Selection" for information about making input selections.*
* *YCbCr cannot accept the input of signals other than NTSC 3.58 and PAL.*
* *When the video connectors are Y,Pb,and Pr connectors, please contact Olympus Digital Technical Support.*

E-15

Operating

1 **Set up the screen and the projector**
See "Projection Distance Table" on Page E- 11(S) for the distance between the screen and the projector.

2 **Connect the personal computer or video equipment to the projector**

3 **Connect the AC IN connector of the projector and the power outlet using the supplied power cable.**
The POWER indicator will light amber, the cooling fan will rotate at low speed, and the unit will enter the standby mode.
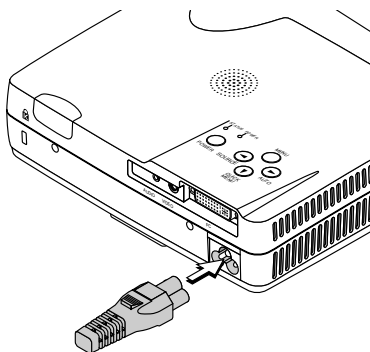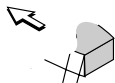
4 **Turning on the projector power**
Main unit operation: Press and hold the POWER button for 1 second.
Remote control operation: Press the POWER ON button.

The POWER indicator changes to a blinking green and lights steadily after about 60 seconds. The projection screen brightens after about 40 seconds.

The projector is now capable of regular projection.

5 **Switch on the power of the connected equipment**

6 **Select the input**
Main unit operation: Press the SOURCE button.
Remote control operation: Press the desired button from among the input selection buttons.
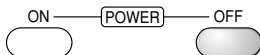
Finishing

1 **Switch off the power of the connected equipment**
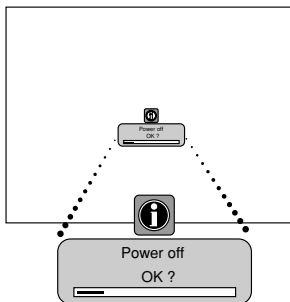
2 **Switch off the power of the projector**
Main unit operation: Press and hold the POWER button for 1 second.
Remote control operation: Press the POWER OFF button.
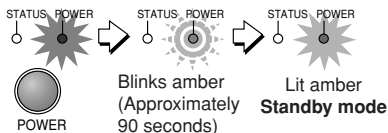
ON ——— [POWER] ——— OFF

The "Power off" indication will appear.
When the red bar extends fully (in about 5 seconds), the projection screen will go off and the unit will enter the power off operation.

Power off
OK ?

Note
* *The operation can be cancelled by pressing a button other than the POWER button.*
* *One more press of the POWER (POWER Off) button will switch off the power.*

The POWER indicator changes to blinking amber and lights a steady amber after about 90 seconds (when the unit enters the standby mode).

STATUS POWER ⇨ STATUS POWER ⇨ STATUS POWER

POWER

Blinks amber
(Approximately
90 seconds)

Lit amber
Standby mode

3 **Unplug the power cable**
Check that the sound of the cooling fan is quieter and that the POWER indicator is lit steadily in amber, then unplug the power cable.
The POWER indicator will go off when the power cable is unplugged.

Warning
Do not disconnect the power cable while the POWER indicator is blinking in amber. Doing so could shorten the life of the lamp or lead to breakdown of the projector.

E-17

Adjustment of the Projection Screen

Switch on the power of the connected equipment and make the adjustments with the video signal being input to the projector.

Projection Screen Position Adjustment

### Turn the zoom ring to adjust the screen size of the projection image.

Adjust the image to match the desired screen size. When outside of the adjustment range, move the projector to the rear or forward.

Zoom ring
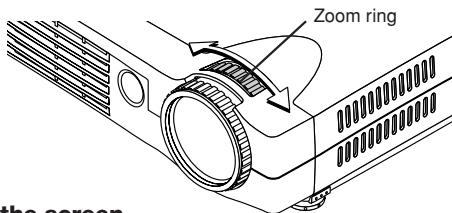
Adjust the projection image to the screen.

Check that the screen is set level and vertically.

(1) If the image is shifted to the left or right, move the main unit horizontally. (Align the center of the screen and the center of the lens of the main unit.)

(2) If the image is shifted vertically, move the image up or down with the adjuster. See "Using the Adjusters" on Page E-19(S).

(3) If the image is slanted, adjust by turning the right or left front adjuster. See "Using the Adjusters" on Page E-19(S).

(4) A projection image such as that illustrated in the diagram is the result of the projector not being perpendicular to the screen. Set the projector so that it is pointing straight toward the screen.

(5) If the image shows keystone distortion, adjust using remote control or menu operations. See "Correcting Keystone Distortion of the Projection Screen" on Page E-26(S).
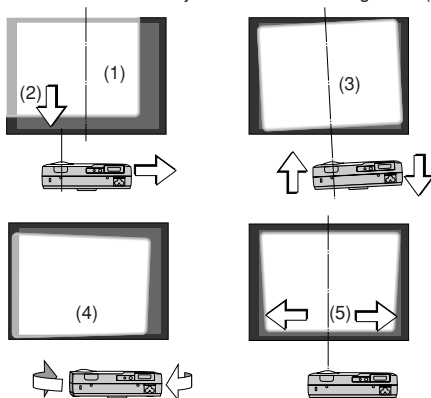
Note
* The projection image can be turned upside down or turned left to right using menu operations. See "Projection" on Page E-52(C).
* A portion of the projection screen can be enlarged and moved by remote control operation. See "Enlargement of the Image and Video Movement" on Page E-27(S).

E-18

General Operation

This section describes the use of direct operation with the main unit or remote control buttons.

For information about operation using the menu, see "Menu Operation Method" on Page E-37(C) and the various items on Pages E-46(C) to E-60(C).

Input Selection

This operation selects the input signal to be projected.

Main unit operation: Press the SOURCE button.
(It will not function while the menu or the quick menu is displayed.)

When Auto Source is On
If there is no input signal at the source that was previously used, the projector automatically selects the next source that has an input signal.

When Auto Source is Off
Each press of the button switches the selection one step in the sequence of Analog RGB → YPbPr → Digital RGB → VIDEO → S-VIDEO → YCbCr.
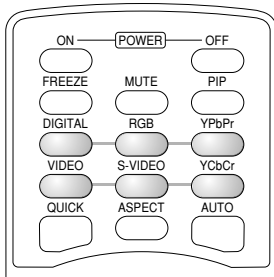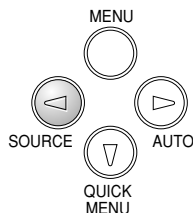
Remote control operation: Press the desired input selection button.

When Auto Source is On
When an input signal is not present at the selected source, the projector automatically selects the next source that has an input signal.

When Auto Source is Off
The projector switches to the selected source regardless of whether an input signal is present.

Note
* When you do not operate source selection, the projector will assume the input selection condition that was previously used.
* See "Auto Source" on Page E-55(C) for information about the Auto Source on and off conditions.
* YPbPr input selection cannot be used when YPbPr is set to "Disable". See "YPbPr" on Page E-57(C).
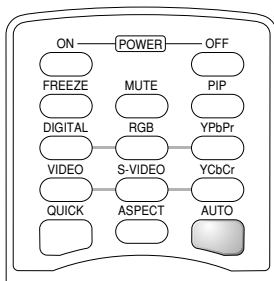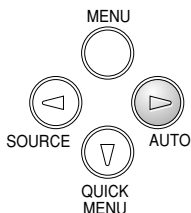
E-20

Automatic Adjustment of Analog RGB

This function automatically adjusts the position shift of the analog RGB input signal, the size of the picture, vertical striping, and color infidelity.

Normally, this function is adjusted automatically at the time of signal selection.

Main unit operation/Remote control operation: Press the AUTO button. (This will not function while the menu or the quick menu is displayed.)
A press of the AUTO button starts the automatic adjustment.

MENU

SOURCE AUTO

QUICK
MENU

ON — POWER — OFF

FREEZE   MUTE   PIP

DIGITAL   RGB   YPbPr

VIDEO   S-VIDEO   YCbCr

QUICK   ASPECT   AUTO

Note
* *If the display position is shifted, vertical lines appear on the picture, or the projection is not good even after using automatic adjustment, please perform image adjustment manually. See "Picture Adj. / Fine Picture / H Position / V Position" on Page E-47(C).*
* *When the image extends beyond the boundaries of the screen or is smaller than the screen, set Aspect to "Auto". See "Selection of Aspect Ratio" on Page E-22(S) and "Aspect" on Page E-51(C).*

E-21

Selection of Aspect Ratio

This function selects horizontal and vertical picture proportions of the input signal.

Press the ASPECT button while viewing the projected image and select the aspect ratio.
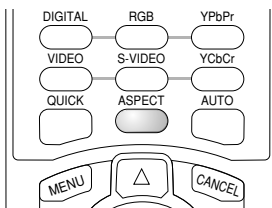
Image of the Personal Computer
(when selecting digital RGB or analog RGB)
Each press of the ASPECT button advances the selection one step in the sequence of Auto → Direct → Real, and then repeats.

Auto .... Automatically enlarges or reduces the image to project a full screen in a ratio of 4:3

Direct .... Maintains the aspect ratio and projects a picture of the maximum displayable size

Real .... Projects the input signal without pixel conversion

Input Signal		Auto	Direct	Real
The setting is higher than the display resolution of the projector.				
The setting is lower than the display resolution of the projector.				

Image of the Video Equipment
(when selecting VIDEO, S-VIDEO, YCbCr, or YPbPr)
Each press of the ASPECT button advances the selection one step in the sequence of Auto → Wide → Zoom, and then repeats.

Auto .... While maintaining the aspect ratio, projects a full screen so that no portions extend beyond the boundaries of the screen. The top and bottom of the 16:9 image becomes black.

Wide .... Projects to fill the full width with the entire image at 16:9. (This feature is used to project a squeezed image in a proper aspect ratio.)

Zoom .... Projects only the 4:3 portion within 16:9 image to fill the screen. (Portion that extend off screen is cut.)

Aspect ratio selection	Auto	Wide	Zoom
4:3 screen			
16:9 screen			

Note
Please note that using this monitor for the purpose of commercial gain or the attraction of public attention in a venue such as a coffee shop or hotel and projecting a 4:3 screen in wide mode or leaving a squeezed screen as a compressed image raises concern about the infringement of copyright rights which are protected by copyright law.

**E-22**

Projecting a Picture in Picture

This function displays the video image (i.e., the picture of the VIDEO connector input) on the personal computer screen (i.e., the PC connector input screen) as a sub-picture.

Each press of the PIP button advances the screen size of the sub-picture one step in the sequence of On → Off (i.e., the sub-picture display is off), and then repeats.

> *Note*
> * *The main picture is termed the Analog RGB, Digital RGB, or YPbPr input screen, whereas the sub-picture is termed the VIDEO, S-VIDEO, and YCbCr input screen.*
> * *The sub-picture cannot be displayed when the main screen receives the image from the VIDEO connector.*
> * *The sub-picture cannot be displayed when picture in picture is set to off.*
> * *To change the display position of the sub-picture, see "Picture in Picture" on Page E-54(C).*

Sub-picture

Main-picture
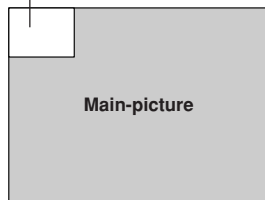
Using the Quick Menu

This function permits commonly used adjustments to be performed quickly.
Note that the Quick Menu will not be displayed unless the signal of the connected equipment is input. Please select the input that you wish to adjust.

Main unit operation
(1) A press of the QUICK MENU button brings up the quick adjustment display. Further presses allow selection of the desired adjustment display.
(2) Press the ⟋ or ⟋ button to make the adjustment.
(3) To close the display immediately, press the MENU button.
    In the absence of operations for a period of about 10 seconds, the display will close automatically.

MENU

SOURCE   AUTO
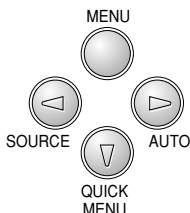
QUICK
MENU

Remote control operation
(1) A press of the QUICK button brings up the quick adjustment display. Further presses cause the adjustment display to change in sequence.
    The adjustment display can be selected with use of either the cursor ▲ or ▼ button.
(2) Press the cursor ◄ or ► button to make the adjustment.
(3) To close the display immediately, press the CANCEL button.
    In the absence of operations for a period of about 10 seconds, the display will close automatically.

E-24
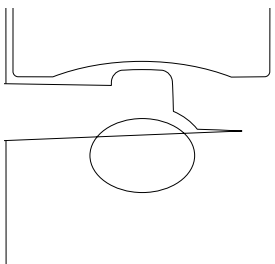
Content of Adjustments and Settings
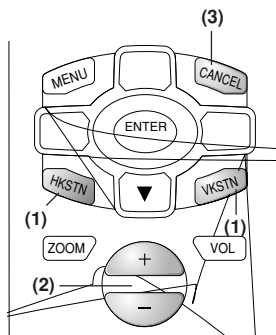
Example: Brightness adjustment display

```
                ┌──────────────────────────────────┐
                │ Brightness      0   – ▇▇▇▇   +    │
                └──────────────────────────────────┘
Display Item                    Adjustment/Setting
```

Brightness	**Adjusts the brightness of the image.** Brightness decreases in the (–) direction and increases in the (+) direction.
Contrast	**Adjusts the contrast of the image.** Contrast becomes less distinct in the (–) direction and more pronounced in the (+) direction.
V Keystone	**Corrects (vertical) keystone distortion of the screen.** Adjusts the left and right edges of the screen so that they are parallel.
H Keystone	**Corrects (horizontal) keystone distortion of the screen.** Adjusts the up and down edges of the screen so that they are parallel.
Picture in Picture	**The picture from the VIDEO jack is displayed as a sub-picture on the input screen from the PC connector.** This function selects either the size of the sub-picture on or off (i.e., no display). (Neither the adjustment display nor the picture will be output unless the signal is input to the PC connector.) See Page E-54(C) for information about changing the display position of the sub-picture.
Volume	**This function adjusts the volume of the built-in speaker.** The volume decreases in the (–) direction and increases in the (+) direction.
Quick Color Adj.	**Select the preset color mode.** See Page E-49(C).

Correcting Keystone Distortion of the Projection Screen

This adjustment is used when the projection screen is distorted.
Note that extreme distortion cannot be corrected and in such circumstances the projector should be placed to face the screen straight on beforehand.

Adjustment Method

(1) To adjust up-down distortion (e.g., Screen Example 1), press the HKSTN button. The horizontal keystone adjustment display will appear.

H Keystone	0	− ▬▬▬▬▬ +

To adjust left-right distortion (e.g., Screen Example 2), press the VKSTN button. The vertical keystone adjustment display will appear.

V Keystone	0	− ▬▬▬▬▬ +

(2) While viewing the screen, press the (+) button or the (−) button and adjust the vertical or horizontal edges to be parallel. In Screen Example 3, horizontal and vertical keystone distortion should be adjusted.

(3) To close the display immediately, press the CANCEL button. In the absence of operations for a period of about 10 seconds, the display will close automatically.

Screen Example 1

Screen Example 2

Screen Example 3
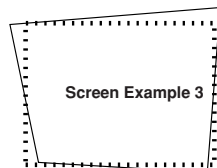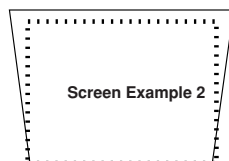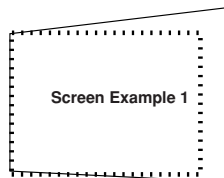
Note
* The keystone adjustment values can be overwritten and saved. See "Keystone" on Page E-53(C).
* Overcompensation of the horizontal keystone correction value will result in a narrowing of the vertical keystone adjustment range. Likewise, overcompensation of the vertical keystone correction value results in a narrowed horizontal adjustment range.
* Note that the adjustment range will differ depending on the adjustment conditions.
* The screen examples have been depicted in an exaggerated form to aid in description.

E-26

Enlargement of the Image and Video Movement

This function digitally enlarges the personal computer image and video image (up to 10 times).

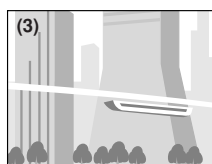(1) Press the ZOOM button.
The zoom selection display will appear.

| **Zoom** | 0 | − ▯▭▭▭▭▭▭▭ + |

(2) Enlarge to the desired size.
Each press of the (+) button enlarges the image and each press of the (−) button makes the image smaller (returning it to 1:1).

(3) Pressing the cursor (▲▼◄►) buttons at the time of the zoom operation will cause the display position to move.
(There will not be any movement when zoom is at 0.)

(4) To close the display immediately, press the CANCEL button. In the absence of operations for a period of about 10 seconds, the display will close automatically.
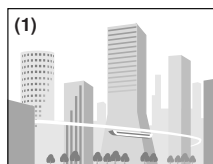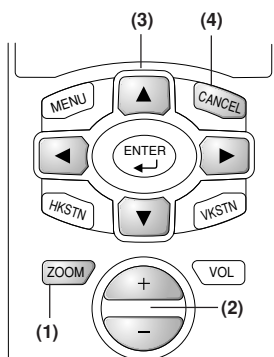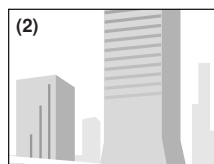
(1)	(2)	(3)
(No enlargement)	(Approximately 2 times enlargement)	(Movement)

Note
After magnifying the image, be sure to use the ZOOM button to bring the gauge value back to "0".

The image can also be moved in the following circumstances.
* When "Aspect" is set to "Real" by the signal of the personal computer, and the input resolution is higher than the display resolution of the projector.
* When "Aspect" is set to "Zoom" by the video signal.

Note
* Zoom and image movement functions are cancelled when the input is switched.
* The greater the zoom enlargement, the less distinct the image will appear. The reason for this is that the dots are being digitally corrected so that they are not conspicuous.
* Movement of the screen will not be possible when the menu screen is being displayed.

E-27

Adjustment of the Volume

This function adjusts the volume of the built-in speaker.

(1) Press the VOL button.
The volume adjustment display will appear.

E-28
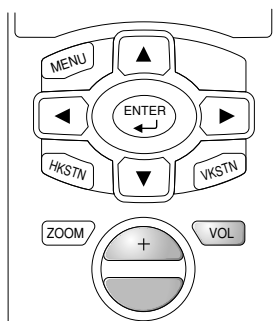
Menu Operation Method

List of Item Names Offering Input Selection and Adjustments/Settings

The item names that can be adjusted/set will differ depending on the input signal.

[Example of Menu Display Items at the Time of Input Signal Video Selection]

Image	Color	**View**	Setup	Info.

Aspect	Auto
Filter	3
Projection	▶
Key	**V Keystone**	0	− ▭ +
	H Keystone	0	− ▬ +
	Keystone Save	Off

Input Signal

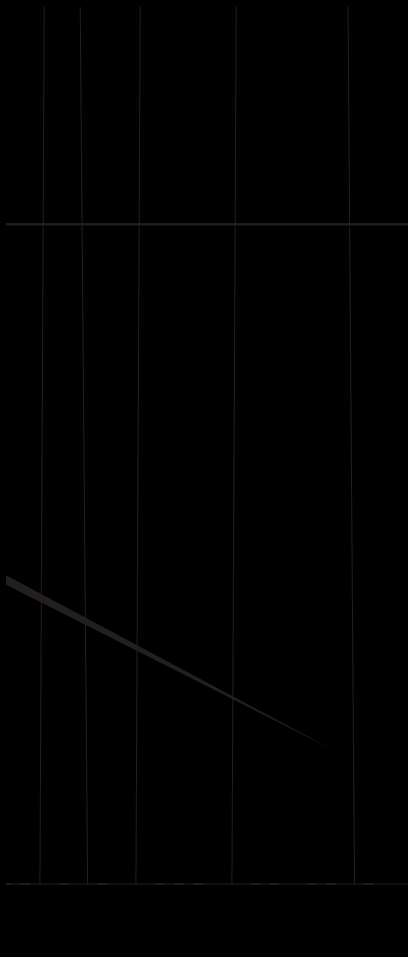| Menu Name	Item Name	Sub Menu Item Name	Analog RGB	Digital RGB	YPbPr	YCbCr	Video	S-Video	Reference Page
Image	Brightness		○	○	○	○	○	○	E-46(C)
	Contrast		○	○	○	○	○	○	E-46(C)
	Picture Adj.		○						E-47(C)
	Fine Picture		○						E-47(C)
	H Position		○						E-47(C)
	V Position		○						E-47(C)
	Color					○	○	○	E-46(C)
	Tint					○	○	○	E-46(C)
	Sharpness					○	○	○	E-46(C)
	Reset		○	○	○	○	○	○	E-48(C)
Color	Quick Color Adj.		○	○					E-49(C)
	Gamma		○	○	○	○	○	○	E-49(C)
	Color Temp.		○	○	○	○	○	○	E-49(C)
	White		○	○	○	○	○	○	E-50(C)
	Color System					○	○	○	E-50(C)
	Color Space				○	○			E-50(C)
View	Aspect		○	○	○	○	○	○	E-51(C)
	Filter		○	○	○	○	○	○	E-52(C)
	Projection	Vertical Flip	○	○	○	○	○	○	E-52(C)
		Horizontal Flip	○	○	○	○	○	○	E-52(C)
	Keystone	V Keystone	○	○	○	○	○	○	E-53(C)
		H Keystone	○	○	○	○	○	○	E-53(C)
		Keystone Save	○	○	○	○	○	○	E-54(C)
	Picture in Picture	Size	○	○	○				E-54(C)
		Position	○	○	○				E-54(C)

"Tint" can be adjusted only at the time of NTSC composite/S signal input.

E-29

[Example of Menu Display Items at the Time of Input Signal Video Selection]

Image	Color	View	Setup	Info.

Language	▶
Auto Source	On
Auto Power Off	Off
On Screen	On
Menu Position	⬜
YPbPr	Disable
Background	Black

Input Signal

Menu Name	Item Name	Sub Menu Item Name	Analog RGB	Digital RGB	YPbPr	YCbCr	Video	S-Video	Reference Page
Setup	Language		○	○	○	○	○	○	E-55(C)
	Auto Source		○	○	○	○	○	○	E-55(C)
	Auto Power Off		○	○	○	○	○	○	E-56(C)
	On Screen		○	○	○	○	○	○	E-56(C)
	Menu Position		○	○	○	○	○	○	E-57(C)
	YPbPr		○	○	○	○	○	○	E-57(C)
	Background			○	○	○	○	○	E-57(C)
	White Balance		○						E-58(C)
Info.	Status		○	○	○	○	○	○	E-59(C)
	Factory Default		○	○	○	○	○	○	E-59(C)
	Lamp Timer Reset		○	○	○	○	○	○	E-59(C)
	Resolution		○	○					E-60(C)
	Frequency		○	○					E-60(C)
	Lamp Timer		○	○	○	○	○	○	E-60(C)

E-30

STATUS Indicator	POWER Indicator	Action to Take
STATUS Blinks red (0.5 s lit / 0.5 s off)	POWER Lit amber	**The fan is stopped.** Unplug the power cable and request service from Olympus Digital Technical Support.
STATUS Blinks red (1 s lit / 1 s off)	POWER Lit red	**The lamp cover is open.** The lamp cover is not attached properly. Attach it properly.
STATUS Lit red	POWER When power is on: Lit green When power is off: Lit amber	**It is timer to replace the lamp.** The lamp timer has exceeded 1000 hours. Replace the lamp cartridge.
STATUS Lit red	POWER Lit amber after 90 seconds of blinking in amber	**The lamp's service life has ended.** The lamp timer has exceeded 1100 hours. The lamp will not light. Replace the lamp cartridge.

Note
Should the projector not project properly, see "Troubleshooting" on Page E-33, 34(S).

E-32

Troubleshooting

Check the following matters before requesting servicing.

Problem	Check	Reference Page
No power	* Has the power plug become disconnected from the outlet?	E-16(S)
	* Is the lamp cover properly attached?	E-31, 38(S)
	* Has the internal temperature become high? When the internal temperature becomes very high, to protect the unit the power will not switch on.	E-31, 32(S)
	* Has the lamp timer exceeded 1100 hours? The power will no longer switch on once the timer has exceeded 1100 hours.	E-32(S)
No video	* Has the connected input been selected?	E-20(S)
	* Is the cable of the input connector properly connected?	E-12 – 15(S)
	* If there is connection to a personal computer, is a signal being output from the personal computer?	E-20(C)
	* Has a signal that is higher than the supported frequency of the projector been input?	E-70(C)
	* Check that the image adjustment brightness and contrast are not set to minimum.	E-25(S), 46(C)
	* Has the lamp burned out?	E-31(S)
	* Is the STATUS indicator blinking?	E-31(S)
	* When a monochrome video signal cannot be displayed properly, set the input selection to "YCbCr".	E-20(S)
Distorted video	* Is the projector installed properly?	E-18(S)
	* Is the keystone adjustment properly adjusted?	E-26(S), 53(C)
Blurred video	* Is the lens properly focussed?	E-19(S)
	* Are the projection screen and the projector installed at the proper distance?	E-10, 11(S)
	* Has the projection distance exceeded the focussing range?	E-10, 11(S)
	* Is there condensation on the lens and other parts? When the projector has been stored in a cold location and the power is switched on in a warm location, there may be condensation on the lens and other internal optical parts. Should this occur, wait several minutes until the condensation disappears.	–
Image position is shifted and doesn't display properly	* Is the input signal being supported for resolution and frequency? Check the resolution of your personal computer.	E-70(C)
Image is broken	* When the image is broken in the horizontal or vertical direction, or the image does not fill the entire screen, select a suitable aspect ratio.	E-22(S), 51(C)
Overall color of image is strange	* When a component signal is being input, the color space setting is different. Perform the color space setting.	E-50(C)

E-33

Problem	Check	Reference Page
Menu name cannot be selected	* Other than for "Setup" and "Info.", selection is not permitted unless a signal is input to the projector and an image or picture is projected.	–
Pressing the PIP button does not display a sub-picture	* There will not be a display unless the personal computer screen is being projected. An image will not be output unless a video image is being input.	E-23(S)
Remote control does not function	* Has the transportation insulation sheet been removed?	E-9(S)
	* Is an obstacle located between the remote control and the remote control sensor of the main unit?	–
	* Is the remote control out of range for its signal to reach the sensor?	E-14(C)
	* Is there strong light or a fluorescent lamp in the vicinity of the sensor?	–
	* Are the batteries weak? Try directing the remote control toward the remote control sensor from a close distance and operating it. If there is difficulty in changing settings, the batteries are weak. Replace the button battery (CR2025) with new one.	E-9(S)
STATUS indicator lights or blinks	* See the STATUS indicator list.	E-31, 32(S)
Brightness is uneven	* When projecting a rather dark image, the brightness may be uneven in different parts of the image. This is not a malfunction.	–

If the problem is still not solved after checking the aforementioned matters, please contact Olympus Digital Technical Support.

E-34

Cleaning

● Be certain to disconnect the power plug from the power outlet before cleaning.
● Do not spray or otherwise expose the projector, lens, or screen to volatile substances such as insecticides. Do not leave rubber or vinyl products in contact with the projector for long periods. Doing so could cause them to undergo qualitative changes or the coatings may peel, etc.

Cleaning a Soiled Projector Main Unit

* Wipe with a lint-free, soft, dry cloth.
   When very dirty, wipe with a cloth that has been moistened with a diluted neutral detergent, then finish with a dry cloth. If a chemically-treated cloth is going to be used, please follow any written warnings.
* Do not wipe with thinner, benzene, or other solvents. Doing so could cause them to undergo qualitative changes or the coatings may peel, etc.
* When removing the dust of the outflow and intake holes, use the brush attachment on a vacuum cleaner to clean out the dust. Avoid using the vacuum directly without attaching the adapter as well as the use of a nozzle adapter.
* Do not scratch or otherwise hit the projector body with your nails or other hard object, since this will cause scratches.

Dirty Lens

* Clean using the same method you would use to clean a camera lens: Use a commercial blower for camera use or cleaning paper for eye glasses. Be careful not to scratch the lens at this time.

Dust of the Intake and Outflow Holes

Dust that collects in the intake and outflow holes will obstruct the ventilation and cause the internal temperature to rise which could cause damage. Clean this area carefully. As a guideline, clean at least every 100 hours of usage.

* Switch off the power, check that the POWER indicator has changed to a steadily lit amber, then unplug the power cable.
* Clean out the holes from the outside using a vacuum cleaner. Use the brush adapter of the vacuum cleaner to do this. Avoid using the vacuum directly without attaching the adapter as well as the use of a nozzle adapter.
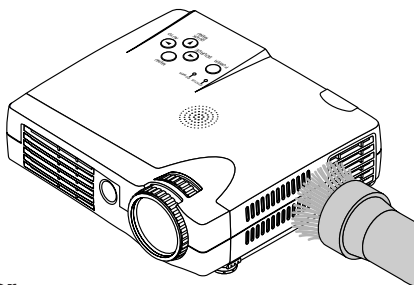
Cleaning the Inside of the Projector

Cleaning of the inside of the projector is required about once a year. Failure to clean over a long period while dust has collected inside the projector could cause a fire or breakdown. Do not clean the inside of the projector by yourself. Please be sure to contact Olympus Digital Technical Support.

E-35

Replacing the Lamp Cartridge

The lamp that is used as a light source in the projector has a limited service life. The rated service life of the lamp is about 1000 hours. This could be shortened depending on conditions of use and other factors.

When the lamp timer exceeds a usage time of 1000 hours, the STATUS indicator lights and the lamp timer display appears on the screen. When usage time exceeds 1100 hours, the lamp will cease to light. Should this occur, it is time to replace the lamp cartridge.

⚠ CAUTION

- **To replace the lamp cartridge, first switch off the power, check that the POWER indicator has changed to a steady amber, then unplug the power plug from the outlet and let the projector stand for approximately 60 minutes before making the replacement. Due to the high temperature, replacement of the lamp cartridge during operation or immediately after stopping the projector may cause burns.**
- **To prevent a dangerous situation, please perform the replacement work at a position that is lower than the face. In the event of the lamp cartridge bursting, working at a position that is above face level could result in glass fragments or other substances entering the eyes or elsewhere causing injury.**
- **Do not remove screws other than the specified ones.**
- **The light source of the projector uses a mercury lamp having a high internal pressure (hereafter referred to as a high-pressure mercury lamp or lamp). Please exercise due care in handling.**
- **When the usage time of the lamp exceeds 1000 hours, the STATUS indicator of the projector lights. Please promptly replace the lamp with a new one even if the lamp still lights normally.**
- **As a result of the deterioration of the high-pressure mercury lamp due to shocks, scratches, and the passage of usage time, the lamps have characteristics such as not lighting and reaching the end of their service life, and bursting with an associated loud noise.**
- **Do not touch the glass portion of the lamp cartridge with your bare hands. Doing so could cause the lamp to burst or shorten the service life. The service life of the lamp may also vary depending on the usage conditions and individual differences. Although infrequently, the lamp may burst a little while after it was used.**
- **When the high-pressure mercury lamp bursts, glass fragments fly and scatter inside the lamp house and outside of the projector, and the internal gas of the lamp can leak to the outside via the ventilation holes of the projector. Should the lamp burst, do not bring your face, hands, or other parts of your body close to the projector. Promptly request a lamp replacement and internal inspection from Olympus Digital Technical Support.**
- **The inside of the high-pressure mercury lamp contains substances that are harmful to the body such as mercury and others substances. If your face, hands, or other parts of your body are close to the projector when the lamp bursts and if the gas generated from the lamp is inhaled or comes in contact with the body, please consult a doctor promptly.**
- **The lamps of projectors use the same harmful substances as fluorescent lamps and halogen lamps (including mercury and halogen substances). Please dispose of used lamps using the same classification method as typical fluorescent lamps, etc.**

Turn
been prepared in advance to prevent scratches. This will assist in
lamp cartridge replacement. After replacement, return the projector
to   the   original   condition.
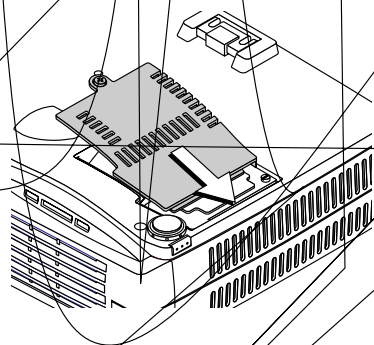
Specifications

Optical

DMD   Single Chip Digital Micro Device (DMD)
                           1024 × 768 pixels
Lamp   120 W high-pressure mercury lamp
Projection lens   Manual zoom (×1.2), Manual focus F = 2.6 – 2.9, f = 27.5 – 33.0 mm
Image size   Minimum 26 inch (at projection distance of 1.20 m / 3.9 feet telephoto)
                           Maximum 200 inch (at projection distance of 7.86 m / 25.8 feet wide)
Light Output   1000 lumens
Contrast Ratio   2000:1 (Full on/off)

Electrical

Inputs   Video (NTSC3.58/NTSC4.43/PAL/PAL_N/PAL_M/PAL60/SECAM)
                           RGB (Horizontal :15 to 92 kHz, Vertical 50 to 120 Hz)
Color Reproduction   Full color (16,770,000 colors)
Resolution   SXGA (Compression), XGA(True), SVGA/VGA (Expansion/True)
Input Current   1.8 A
Power Requirement   100 - 240 V AC, 50/60 Hz
Power Consumption   180 watts

Mechanical

Dimensions Excluding Stand   18.0 cm (W) × 4.7 cm (H) × 16.3 cm (D)
                             7.1 in.(W) × 1.9 in.(H) × 6.4 in.(D)
Weight   Approximately 1.1 kg / 2.4 lbs
Operational Temperatures   Data projector: 5° to 35°C (41° to 95°F), 30 to 85% humidity
Regulations   UL Approved (UL 1950, CSA 950)
                             Meets FCC Class A requirements

* Specifications and design are subject to change without notice.

Technical Assistance :

Olympus Digital Technical Support
(800)798-2777 toll-free hotline
Mon. – Fri., 8 AM to 10 PM Eastern Time
E-mail : distec@olympus.com
Website : www.olympusamerica.com

For supplies and accessories :

Olympus Emporium
www.olympusamerica.com/store
(800)201-7766

Assistance Technique :

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